FCC TEST REPORT

Client Name	:	Anker Innovations Limited
Address	:	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong
Product Name	:	Anker 633 Magnetic Battery (MagGo)
Date	:	Feb. 16, 2022

Shenzhen Anbotek Compliance Laboratory Limited

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TEST REPORT

Applicant	:	Anker Innovations Limited
Manufacturer	:	Anker Innovations Limited
Product Name	:	Anker 633 Magnetic Battery (MagGo)
Model No.	:	A1641
Trade Mark	:	ANKER
Rating(s)	:	USB-C Input: 5V⎓3A/9V⎓2.22A USB-C Output: 5V⎓3A/9V⎓2.22A USB-A Output: 5V⎓3A/9V⎓2A Wireless Output: 5W/7.5W Total Output: 5V⎓3.6A Max Battery Capacity: 5000mAh, 7.7V, 38.5Wh
Test Standard(s)	:	**FCC Part 1.1310, 1.1307(b)**
Test Method(s)	:	**KDB680106 D01 RF Exposure Wireless Charging Apps v03r01** **TCB Workshop, October 27, 2021.**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 1.1307 & KDB680106 D01 & TCB Workshop, October 27, 2021 requirements.
This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt	Dec. 08, 2021
Date of Test	Dec. 08~ 17, 2021
Prepared By	Ella Liang (Ella Liang)
Approved & Authorized Signer	Kingkong Jin (Kingkong Jin)

1. General Information

1.1. Client Information

Applicant	:	Anker Innovations Limited
Address	:	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong
Manufacturer	:	Anker Innovations Limited
Address	:	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong

1.2. Description of Device (EUT)

Product Name	:	Anker 633 Magnetic Battery (MagGo)	
Model No.	:	A1641	
Trade Mark	:	ANKER	
Test Power Supply	:	DC 7.7V battery inside	
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)	
Product Description	:	Operation Frequency:	111-149KHz
		Modulation Type:	FSK
		Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi (Provided by customer)
Remark: 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.			

1.3. Auxiliary Equipment Used During Test

Adapter	:	M/N: A2630 Input: 100-240V-1.3A,50-60Hz USB-C Output: 5V⎓3A, 9V⎓2A USB-A Output: 5V⎓4A
Mobile phone	:	Manufacturer: HUAWEI TECHNOLOGIES CO., LTD. M/N: YOK-AN10

1.4. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Electric and Magnetic field Analyzer	NARDA	EHP-200A	180ZX10202	Feb. 24, 2021	1 Year

1.5. Measurement Uncertainty

Magnetic Field Reading(A/m)	:	+/-0.04282(A/m)
Electric Field Reading(V/m)	:	+/-0.03679(V/m)

1.6. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.
1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China. 518102

2. Measurement and Result

2.1. Requirements

According to the item 5.b) of KDB 680106 D01v03:
Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

1) Power transfer frequency is less that 1 MHz

2) Output power from each primary coil is less than or equal to 15 watts.

3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils

4) Client device is inserted in or placed directly in contact with the transmitter

5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)

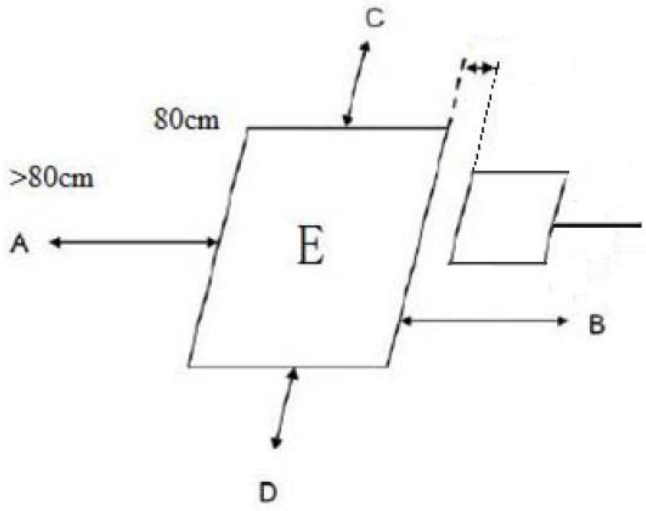
6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Limits For Maximum Permissible Exposure (MPE)

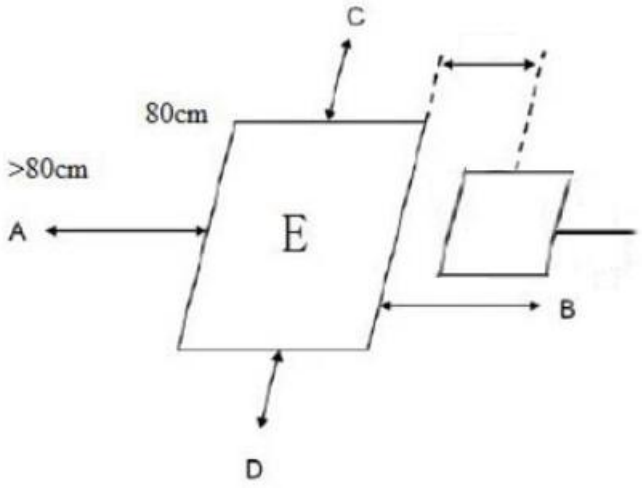
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*($900/f^2$)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

2.2. Test Setup



Note:
H-field data are taken along all three axes the device, from 0 cm to 20 cm, in 2 cm minimum increment measured from the edge of the device, with one axis coincident with the axis of the main coil.



Note: Measurements should be made at 15 cm surrounding the EUT and 20cm above the top surface of the EUT. (probe radius is 4.5cm)

2.3. Test Procedure

1) The RF exposure test was performed in anechoic chamber.
2) The measurement probe was placed at required test distance (from 0 cm to 20 cm, in 2 cm minimum increment) which is between the edge/top surface of the charger and the edge of probe.
and the measurement probe was placed at required test distance 15cm and 20cm which is between the edge of the charger and the geometric center of probe.

3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed. (A is the right, B is the back, C is the left, D is the front, and **E** is the **top** side.)
4) The EUT was measured according to the guidance of TCB Workshop, October 27, 2021 and KDB 680106 D01 v03r01.

Remark;
The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

2.4. Test Result

2.4.1. Equipment Approval Considerations item 5.b of KDB 680106 D01 v03.

1) Power transfer frequency is less that 1 MHz
- The device operate in the frequency range 111-149KHz.

2) Output power from each primary coil is less than 15 watts
- The maximum output power of the primary coil is 7.5W.

3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils
- The transfer system including a charging system with only single primary coils is to detect and allow only between individual pairs of coils.

4) Client device is inserted in or placed directly in contact with the transmitter
- Client device is placed directly in contact with the transmitter.

5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)
- The EUT is a mobile exposure conditions

6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
- Conducted the measurement with the required distance and the test results please refer to the section 2.4.

2.4.2. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310

Temperature:	23.8°C	Relative Humidity:	52 %
Pressure:	1012 hPa	Test Voltage:	DC 7.7V battery inside

Between the edge/top surface of the charger and the edge of probe

E-Field Strength at 0 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149KHz	0.52	0.68	0.57	0.58	0.66	307	614
50%	111-149KHz	1.53	1.99	1.51	1.63	1.79	307	614
99%	111-149KHz	2.57	2.98	2.56	2.55	2.99	307	614
Stand-by	111-149KHz	0.56	0.65	0.49	0.49	0.67	307	614

E-Field Strength at 2 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.50	0.66	0.56	0.56	0.64	307	614
50%	111-149	1.51	1.96	1.50	1.62	1.77	307	614
99%	111-149	2.55	2.97	2.54	2.53	2.96	307	614
Stand-by	111-149	0.54	0.63	0.47	0.48	0.66	307	614

E-Field Strength at 4 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.49	0.65	0.54	0.55	0.62	307	614
50%	111-149	1.50	1.94	1.47	1.60	1.75	307	614
99%	111-149	2.54	2.95	2.53	2.51	2.94	307	614
Stand-by	111-149	0.52	0.62	0.46	0.45	0.64	307	614

E-Field Strength at 6 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.46	0.64	0.53	0.54	0.60	307	614
50%	111-149	1.47	1.92	1.45	1.58	1.73	307	614
99%	111-149	2.52	2.93	2.51	2.50	2.92	307	614
Stand-by	111-149	0.50	0.61	0.44	0.44	0.63	307	614

E-Field Strength at 8 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.44	0.62	0.51	0.52	0.59	307	614
50%	111-149	1.46	1.90	1.44	1.57	1.72	307	614
99%	111-149	2.50	2.92	2.48	2.49	2.90	307	614
Stand-by	111-149	0.49	0.59	0.43	0.43	0.61	307	614

E-Field Strength at 10 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.42	0.61	0.48	0.51	0.58	307	614
50%	111-149	1.43	1.88	1.42	1.55	1.70	307	614
99%	111-149	2.49	2.91	2.45	2.48	2.87	307	614
Stand-by	111-149	0.47	0.58	0.42	0.41	0.60	307	614

E-Field Strength at 12 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.41	0.59	0.46	0.49	0.55	307	614
50%	111-149	1.42	1.86	1.40	1.54	1.69	307	614
99%	111-149	2.46	2.89	2.44	2.46	2.85	307	614
Stand-by	111-149	0.46	0.57	0.41	0.39	0.59	307	614

E-Field Strength at 14 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.39	0.57	0.44	0.47	0.54	307	614
50%	111-149	1.41	1.85	1.38	1.53	1.66	307	614
99%	111-149	2.44	2.87	2.42	2.45	2.82	307	614
Stand-by	111-149	0.44	0.55	0.40	0.36	0.57	307	614

E-Field Strength at 16 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.36	0.56	0.43	0.45	0.53	307	614
50%	111-149	1.39	1.84	1.37	1.52	1.65	307	614
99%	111-149	2.43	2.85	2.40	2.43	2.80	307	614
Stand-by	111-149	0.42	0.54	0.38	0.35	0.55	307	614

E-Field Strength at 18 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.34	0.54	0.41	0.44	0.52	307	614
50%	111-149	1.38	1.83	1.35	1.51	1.64	307	614
99%	111-149	2.42	2.84	2.38	2.42	2.79	307	614
Stand-by	111-149	0.41	0.53	0.36	0.33	0.54	307	614

E-Field Strength at 20 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.32	0.53	0.39	0.43	0.50	307	614
50%	111-149	1.35	1.81	1.33	1.50	1.63	307	614
99%	111-149	2.40	2.82	2.37	2.40	2.76	307	614
Stand-by	111-149	0.40	0.51	0.35	0.32	0.52	307	614

H-Field Strength at 0 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.058	0.079	0.068	0.066	0.074	0.815	1.63
50%	111-149	0.55	0.54	0.57	0.63	0.81	0.815	1.63
99%	111-149	0.63	0.73	0.68	0.62	0.80	0.815	1.63
Stand-by	111-149	0.66	0.56	0.69	0.78	0.77	0.815	1.63

H-Field Strength at 2 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.056	0.076	0.066	0.064	0.073	0.815	1.63
50%	111-149	0.54	0.53	0.55	0.61	0.80	0.815	1.63
99%	111-149	0.62	0.71	0.67	0.60	0.79	0.815	1.63
Stand-by	111-149	0.65	0.55	0.66	0.77	0.75	0.815	1.63

H-Field Strength at 4 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.054	0.074	0.055	0.062	0.072	0.815	1.63
50%	111-149	0.53	0.52	0.53	0.60	0.77	0.815	1.63
99%	111-149	0.61	0.70	0.65	0.58	0.77	0.815	1.63
Stand-by	111-149	0.63	0.53	0.63	0.76	0.74	0.815	1.63

H-Field Strength at 6 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.052	0.071	0.054	0.061	0.071	0.815	1.63
50%	111-149	0.52	0.50	0.52	0.58	0.75	0.815	1.63
99%	111-149	0.60	0.67	0.63	0.54	0.74	0.815	1.63
Stand-by	111-149	0.61	0.51	0.62	0.75	0.73	0.815	1.63

H-Field Strength at 8 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.051	0.070	0.052	0.058	0.070	0.815	1.63
50%	111-149	0.51	0.48	0.51	0.57	0.74	0.815	1.63
99%	111-149	0.57	0.65	0.62	0.53	0.70	0.815	1.63
Stand-by	111-149	0.59	0.50	0.60	0.72	0.71	0.815	1.63

H-Field Strength at 10 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.050	0.068	0.051	0.056	0.068	0.815	1.63
50%	111-149	0.49	0.45	0.47	0.56	0.73	0.815	1.63
99%	111-149	0.55	0.64	0.60	0.52	0.69	0.815	1.63
Stand-by	111-149	0.58	0.49	0.58	0.70	0.70	0.815	1.63

H-Field Strength at 12 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.047	0.065	0.049	0.054	0.065	0.815	1.63
50%	111-149	0.47	0.43	0.44	0.55	0.71	0.815	1.63
99%	111-149	0.54	0.61	0.57	0.50	0.66	0.815	1.63
Stand-by	111-149	0.55	0.48	0.56	0.67	0.68	0.815	1.63

H-Field Strength at 14 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.046	0.064	0.046	0.053	0.064	0.815	1.63
50%	111-149	0.44	0.42	0.43	0.54	0.68	0.815	1.63
99%	111-149	0.51	0.59	0.55	0.48	0.63	0.815	1.63
Stand-by	111-149	0.54	0.45	0.54	0.65	0.67	0.815	1.63

H-Field Strength at 16 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.045	0.063	0.045	0.050	0.061	0.815	1.63
50%	111-149	0.43	0.41	0.41	0.53	0.66	0.815	1.63
99%	111-149	0.48	0.57	0.54	0.46	0.62	0.815	1.63
Stand-by	111-149	0.52	0.42	0.52	0.64	0.64	0.815	1.63

H-Field Strength at 18 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.043	0.062	0.043	0.047	0.060	0.815	1.63
50%	111-149	0.42	0.40	0.40	0.52	0.64	0.815	1.63
99%	111-149	0.46	0.55	0.53	0.43	0.61	0.815	1.63
Stand-by	111-149	0.51	0.41	0.50	0.63	0.63	0.815	1.63

H-Field Strength at 20 cm

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.041	0.060	0.039	0.045	0.057	0.815	1.63
50%	111-149	0.40	0.39	0.37	0.50	0.59	0.815	1.63
99%	111-149	0.45	0.54	0.50	0.42	0.60	0.815	1.63
Stand-by	111-149	0.50	0.39	0.46	0.61	0.55	0.815	1.63

Between the edge of the charger and the geometric center of probe

E-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	111-149	0.47	0.53	0.39	0.44	0.52	307	614
50%	111-149	1.39	1.88	1.36	1.46	1.67	307	614
99%	111-149	2.40	2.86	2.45	2.41	2.83	307	614
Stand-by	111-149	0.37	0.49	0.34	0.37	0.49	307	614

H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Battery power	Frequency Range (KHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	111-149	0.039	0.059	0.045	0.049	0.048	0.815	1.63
50%	111-149	0.35	0.37	0.38	0.37	0.44	0.815	1.63
99%	111-149	0.48	0.55	0.49	0.39	0.36	0.815	1.63
Stand-by	111-149	0.53	0.29	0.48	0.48	0.47	0.815	1.63

Note: (1) Position E is top side. (2) All the situation (full load, half load and empty load) has been tested, only the worst situation (full load 7.5W) was recorded in the report. (3) All three axes the device has been tested, only the worst results reported). (4) All positions have been tested, only display photos of Position E and A in the report.

APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files for Test Setup Photos of the EUT.

---------- End of Report ----------

Address: 1/F., Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
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